**Genetics with a Smile**  Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Part A: Smiley Face Traits**

(1) Obtain a coin from your teacher. The side of the coin will represent the parents’ alleles.

(2) Flip the coins to decide which parent allele will get passed to the offspring smiley face for each trait. If the coin lands with heads up, it represents a dominant allele. A coin that lands tails up indicates a recessive allele. Record the result for each parent by circling the correct letter. You must flip the coin twice for each trait (once for the mother and once for the father).

**Trait**  **Female**  **Male**  **Genotype**  **Phenotype**

Face Shape C c C c

Eye Shape E e E e

Hair Style S s S s

Smile T t T t

Ear Style V v V v  
Nose Style D d D d

Face Color Y y Y y

Eye Color B b B b

Hair Length L l L l

Freckles F f F f

Nose Color R Y R Y

Ear Color P T P T

**Part B: Is it a boy or girl?**

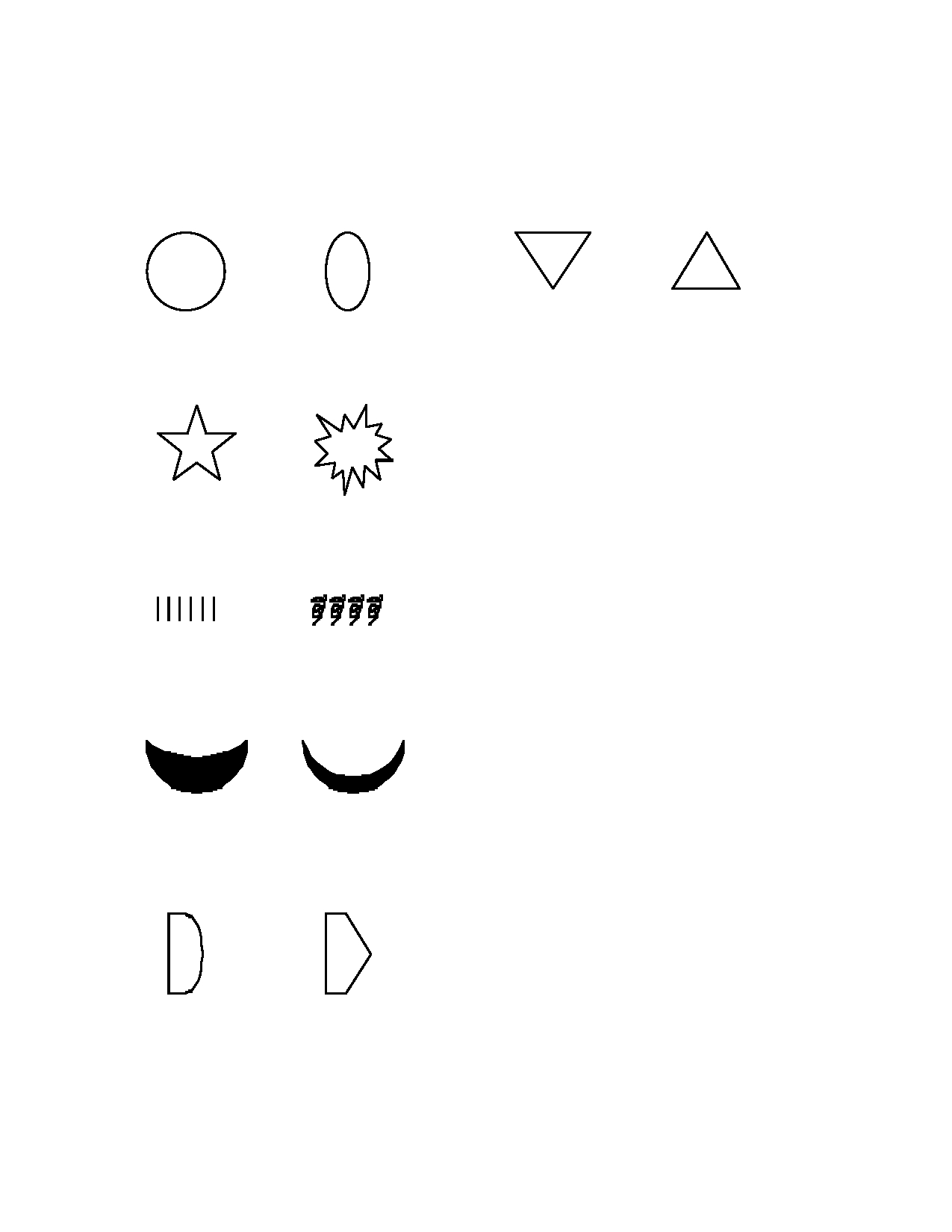
To determine the sex of your smiley face, flip the coin for the male parent. Heads would represent X, while tails would be Y.

**Female**  **Male**  **Genotype**  **Phenotype**

Sex X X X Y

**Part C: Create Your Smiley Face!**

Use the Smiley Face Traits chart and your results from Part A to create a sketch of your smiley face in the box.

*Genetics with a Smile*

***Smiley Face Traits***

**Face Shape**  **Nose Style**

Circle (C)

**Eye Shape**

Star (E)

**Hair Style** Straight (S)

**Smile**

Thick (T)

**Ear Style**

Oval (c)

Blast (e)

Curly (s)

Thin (t)

Down (D)

**Face Color** Yellow (Y)

Green (y)

**Hair Length**

Long (L) Short (l)

**Nose Color**

Red (RR)

Orange (RY) Yellow (YY)

**Sex**

Up (d)

**Eye Color**

Blue (B) Red (b)

**Freckles**

Present (F) Absent (f)

**Ear Color**

Hot Pink (PP)

Purple (PT)

Teal (TT)

Curved (V)

Pointed (v)

To determine the sex, the flip the coin for

the male parent. Heads equals X and tails equals Y.

XX - Female - Add pink bow in hair

XY - Male - Add blue bow in hair